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McKAY CAMPUS SCHOOL

Fitchburg State College

Commonwealth of Massachusetts

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FACULTY

Rose Ann Addorisio	B.S.Ed., M.Ed. Fitchburg State College. Instructor-McKay Campus School, Grade 3. 1969
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Lawrence J. Arnold	B.A. King's College; M.A. Fordham University; Ph.D. Trinity College, Dublin. Assistant Professor - History. 1968 - on leave 1st semester 1971 - 72
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Thomas Battinelli	A.A., B.S. Boston University; M.Ed. Boston College; C.A.G.S. Boston University. Associate Professor and Chairman - Physical Education. 1960
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James Whitehead	A.B. Harvard College; M.A. New York University; Ph.D. University of Virginia. Assistant Professor - English. 1970
Frank Wolf	B.S., M.A., Ed.D. New York University. Professor - Biology. 1957
Daniel Yenkevich	B.A. University of Scranton; M.A. Niagara University. Instructor - History. 1966
Allen W. Zalk	A.B., Ed.M. Boston University; Ed.D. Yeshiva University. Associate Professor - Special Education. 1969
Robert Zottoli	B.A. Bowdoin College; M.S., Ph.D. University of New Hampshire. Associate Professor - Biology. 1965

MEDICAL OFFICERS

Donald Paiewonsky, M.D., Medical	College Physician
Quintino Rollo, M.D., Surgical	College Physician
Doris M. Keefe, R.N., B.S.	Nurse
Margaret M. Peterson, R.N.	Nurse

GENERAL PERSONNEL SUPERVISORS

Carl Beauchamp	Principal Computer Programmer
Albina Davis	Supervising Housekeeper
Paul Dupont	Chief Engineer
Robert McCluskey	Head Janitor
Daniel F. O'Connor	Head Groundsman
Claire G. Lavoie	Head Clerk
Ellen Matson, B.S., M.Ed.	Dietitian

FITCHBURG STATE COLLEGE

Fitchburg State College was established as a normal school under Chapter 457, Acts of 1894 of the General Laws of the Commonwealth of Massachusetts. It became a State Teachers College in 1933 and a State College in 1962. The College now offers the degrees of Bachelor of Arts, Bachelor of Science in Education, Nursing and Medical Technology and the degree of Master of Education. Through the Continuing Studies Division the Master of Education Degree is granted, as is the Bachelor of Science in Industrial Science.

The College is located on the north side of the City of Fitchburg, forty-five miles west of Boston, and is easily reached by car or bus from all parts of Massachusetts.

The campus consists of academic buildings and laboratories, a library and administration center, four dormitories, a dining hall and a gymnasium. Newest buildings on the main campus include an eleven-story dormitory for women and a large auditorium-theater. Either in construction or final planning are an additional dormitory, a fine and industrial arts building, and a multi-story combined library and student union.

A short distance north of the main campus are a thirty-four acre athletic and recreational area and the new 900-pupil McKay Campus School complex, comprised of a modern elementary and junior high school which retains and expands Fitchburg's outstanding feature of a laboratory school system for children in grades one through nine.

The Biology Department maintains a field station on the property of 4-H Camp Middlesex in Ashby, Massachusetts. This facility serves as a focal point for course work and research in field biology and conservation.

The College Library, located on two floors of the Administration Building, at present houses about 70,000 volumes, subscribes to nearly 800 periodicals, and has an extensive collection of musical and spoken word recordings. The collection includes more than 20,000 items on micro-film and micro-fiche.

The Library also includes a basic reference collection of children's literature, and special emphasis is placed on books for students in the fields of education, nursing, guidance, and retarded children.

Over 3000 students are currently enrolled at the College in the undergraduate program with an additional 650 students pursuing graduate studies.

The curricula available to students include work in Elementary, Junior High and Secondary Education, Industrial Arts, Special Education for Teachers of the Mentally Retarded, Nursing and Medical Technology; and Bachelor of Arts programs in Biology, Chemistry, English, History and Physics. The Industrial Arts program is one of the oldest in the nation and the leader in New England. While increasingly more students are taking their degree in Arts and Science, at present about 75% of the graduates of Fitchburg State College enter teaching.

ADMISSION OF STUDENTS

REQUIREMENTS

Fitchburg State College endeavors to offer admission to those students whose high-school records and backgrounds offer promise of a successful and satisfying college experience. Each applicant is considered individually, and the decisions of the Committee on Admissions are based on many factors. The admissions decisions exclude consideration of an applicant's race, religion or national origin.

Taken into consideration are the high-school record, scores on tests administered by the College Entrance Examination Board, recommendations by the high-school principal or guidance counselor, and the extra-curricular and outside-of-school activities. Strongest consideration is placed on the high-school record and rank in class, as this is generally deemed to be the best predictor of success in college.

Applications are accepted beginning in October, and in order to be given consideration the application and all supporting credentials should be received no later than March 1.

At present freshmen are admitted to the College only for the fall semester.

APPLICATIONS

It is necessary that applicants to the College comply with all the following requirements in order to be given consideration:

1. Application Form. To be submitted to the Admissions Office as early as possible during the senior year in high school. Applications may be obtained by writing the College's Admissions Office or, in many cases, from high-school guidance offices.

2. Submission of a transcript of the complete high-school record through the first marking period of the senior year. This must show a minimum of 16 units, preferably in college preparatory subjects. Included must be 4 units of English, 2 in Mathematics, 1 in Science and 1 in American History. In addition, liberal arts candidates must have 2 units in one foreign language. (All students, before entrance to college, must be graduated from high school or offer equivalent preparation).

3. Submission of the College Entrance Examination Board Scholastic Aptitude Test (SAT) scores, and the results of three Achievement Tests. One of the Achievement Tests must be in English, and applicants who expect to continue a foreign language in college should take an Achievement Test in that language. Other Achievement Tests should be taken in the student's major fields of interest. Junior year SAT scores are acceptable, but it is strongly recommended that the senior year examinations also be taken. Note that it is the applicant's responsibility to arrange for the forwarding of the necessary test scores directly to the College from the Educational Testing Service, in Princeton, New Jersey.

A recommendation and personality record from the high-school principal or guidance office, giving evidence of academic interest, ability and preparation, is advised.

Interviews are not normally required, and are not a part of the selection process. However, applicants who desire to have an interview or to visit the campus are invited to write the Admissions Office for an appointment. Interviews cannot be scheduled on Saturdays or holidays.

Fitchburg State employs a "rolling admissions" policy. Rather than a simultaneous notification of all applicants of their acceptance, the candidates are notified on a continuing basis over a period of several months beginning about February 1.

ADVANCED STANDING

A limited number of students may be admitted to Fitchburg State on transfer from other colleges, and this is normally done only for the fall semester. Only students with satisfactory academic and personal records can be considered. Transfer into the Industrial Arts Program can be made only in the Summer Session with the student's eligibility to continue thereafter dependent upon both his achievement and the available space in the shop courses.

The following credentials must be submitted by transfer applicants:

1. Application for Admission.
2. Transcript or transcripts of all previous college work, including a statement of honorable dismissal from the college.
3. A catalog with the courses taken clearly marked.
4. Transferees are advised to submit the SAT scores of the College Entrance Examination Board, and a copy of their secondary school record.

Transfer credits will normally be granted for work completed in other accredited colleges (1) which was of "C" grade or better and (2) in courses similar in content to courses offered at Fitchburg. This evaluation is made by the Registrar only after an application has been processed and admissiblity has been determined.

In accordance with Board of Trustees' policy, preference is given to students seeking transfer from a Massachusetts Community College after completion of two years academic work.

To be given consideration, all applications should be made to the College by May 1.

COLLEGE HOUSING

Residence Hall accommodations are available on campus for both men and women. At present, facilities are limited and preference is given to Freshman applicants. Most rooms are arranged for double occupancy and are furnished with single beds and other equipment. Students for whom dormitory space is not available are permitted to secure their own off-campus housing. Transfer students generally are unable to be considered for Residence Hall accommodations at the present time.

The basic College policy is that students accepted as dormitory residents continue in that capacity during their entire time at the College. Exceptions have been made liberally in recent years because the dormitory

accommodations have been severely limited. The new women's dormitory should greatly alleviate this situation, and it is expected that the College policy regarding continuous dormitory residency can be more closely adhered to in the future.

STUDENT COSTS

The following list includes the essential campus expenses (exclusive of such items as clothing, travel, and entertainment) for which a student should budget for an academic year:

Tuition ..... $200 ($100 per semester)
Tuition (out-of-state students) ..... $600 ($300 per semester)
Student Activity Fee $30
Athletic Fee $20
Books, Supplies, Gym Uniforms $150
Library Fee ..... $5 (per semester)
Laboratory Fee ..... contingent upon courses selected

All fees are subject to adjustment by the Board of Trustees of the State Colleges in keeping with changing costs of operations.

1. Application Fee
   $10 (not refundable nor applicable to tuition).
2. Tuition
   A. For residents of Massachusetts: $200 per year—payable in two installments of $100 at the beginning of each semester.
   B. For non-residents: $600 per year—payable in two installments of $300 at the beginning of each semester.
3. Registration Fee
   A Registration Fee of $20 is required of all new students upon acceptance. It is not refundable, but is credited against the first semester tuition for students enrolling in the College.
4. Student Activity Fee
   All students are required to pay a Student Activity Fee of $30 per year and an Athletic Fee of $20 per year. The non-refundable charges, payable in September, support the extra-curricular and organizational programs on campus.
5. Room and Board for Resident Students
   The cost of boarding is the same for everyone but the rooming cost depends upon the hall to which a student is assigned. The maximum charge for room and board at present is $910 annually and is payable in equal installments at the beginning of each semester.
   A residence hall deposit of $25 is required of all students accepted for rooming in a College dormitory. This payment, not refundable, is credited against the room and board charge.
6. Refunds
   Refunds for students leaving the College within six weeks after the beginning of the semester will be based on a regular, established schedule of refunds.

VETERAN'S EDUCATION

Fitchburg State College is an approved institution for providing education for the returned veteran under Public Laws No. 346, No. 16, and No. 550.

FINANCIAL ASSISTANCE

Every student who attends the College may be said to be a scholarship recipient, as the low tuition charge covers only a fraction of the total educational cost. The Commonwealth of Massachusetts subsidizes a major portion of an individual's true tuition expense.

However, the College participates in several Federal programs designed to provide financial assistance to students. These include:

1. Educational Opportunity Grants — direct federal scholarships based on exceptional financial need and evidence of academic promise.

2. Federal Work/Study Program — campus employment for which students, particularly from low income families, are paid for a specific number of hours of work each week.

3. National Defense Student Loans and Nursing Student Loans programs of borrowing for students with financial need under which the loans must be repaid with a low interest rate within a 10-year period following college attendance. Under certain conditions a portion of the loan may be cancelled for teaching or nursing service after graduation.

A limited number of Special Education scholarships are available for students planning to teach mentally retarded children. Information on these is available from the offices of the Dean of Women and the Dean of Men.

The College also employs students for work on campus and in the dining hall.

Note that establishment of need is basic to all financial aid programs at the College. In order to assess such a need as fairly as possible the College participates in the College Scholarship Service, and each applicant for financial aid must file a Parent's Confidential Statement with the CSS prior to April 1 each year. These forms may be obtained from high schools, colleges, or the College Scholarship Service, P.O. Box 176, Princeton, New Jersey 08540.

Information regarding the Massachusetts State Scholarship Program can be obtained from the high schools or the Board of Higher Education Scholarship Office, 182 Tremont Street, Boston. The College does not administer this program.

Additional information regarding financial aid may be obtained by writing the Dean of Women or the Dean of Men.

REQUIREMENTS FOR GRADUATION

1. Successful completion of all required courses and of the total semester-hour requirements of the program.
2. A 2 or better cumulative average for the total program.
3. A 2 or better average in the major field.
4. The successful completion of a standard first aid course in all teacher-education curricula.
5. The completion of a minimum of 30 semester hours at the college.
6. All Teacher Education majors must take the National Teachers Examination before graduation.
7. Students graduating in June must file an application for graduation with the Registrar not later than February 1 of the year of graduation.

SCREENING POLICIES FOR STUDENT TEACHING

Effective for students entering Student Teaching beginning September, 1971

1. Positive recommendation of a majority of the faculty members in the area of the major and/or specialization.
2. A demonstrated effectiveness in oral and written communication as evidenced by use of currently acceptable levels of English.
3. The successful completion of a standard first aid course (Effective September, 1972.)
4. The successful completion of the tuberculin test.
5. The successful completion of the course or test on the U.S. Constitution, and on the State Constitution (Effective September, 1972.)
6. Each candidate should possess a 2.0 cumulative index and a 2.0 index in his major field, as each department defines "major field." No incomplete in any course is allowed. No probationary status is allowed. No unresolved failure is permitted in a candidate's major field.
7. A student convicted of a felony as defined and identified by the courts of any state is automatically ineligible for a teacher education program.

NOTE: An incomplete or failure in student teaching necessitates the repetition of the entire course.

WITHDRAWAL FROM CLASS

A student who wishes to drop a course must obtain the permission of the Registrar. Any student who fails to do this will automatically receive a WF for the course.

A student who must lighten his load or drop out of college due to extensive illness or serious accident will receive a W regardless of time of withdrawal.

WITHDRAWAL FROM COLLEGE

A student must report to the Dean of Men, Dean of Women or the Registrar and obtain a withdrawal form. This must be properly signed

by all persons through whom he checks out and returned to the Office of the Registrar.

A student who drops out of college without doing this will receive a WF for all of his courses.

PARKING REGULATIONS

Parking facilities at Fitchburg State College are minimal.

Commuting students are required to park on public streets or to obtain identification stickers which allow them to park in student lots on campus on a first-come, first-served basis.

Resident students are not permitted to have vehicles on campus with the exception of seniors, and students whose teaching or nursing assignments require transportation

Sophomore and junior resident students who use personal cars for transportation to and from home, or for reasons of work or the like, must arrange off-campus storage and file evidence thereof with the Dean of Men.

Freshmen resident students are not allowed to keep vehicles in the area.

OTHER REQUIREMENTS AND REGULATIONS

Other requirements and regulations of this college will be found in the student handbooks.

DEGREE PROGRAMS

Fitchburg State College is empowered to grant eight degrees: Bachelor of Arts, Bachelor of Science in Education, Bachelor of Science in Medical Technology, Bachelor of Science in Nursing, Bachelor of Science in Psychology, Master of Arts in the Teaching of English, and Master of Education. Available through the evening session is the degree of Bachelor of Science in Industrial Science.

Students preparing to be teachers are candidates for the Bachelor of Science in Education. They may major in Elementary Education, Industrial Arts, Secondary Education, or Special Education. Students in Secondary Education also have a subject-matter major selected from one of the following fields: Biology, Chemistry, English, Geography, History, Mathematics, or Physics.

Students in all teacher-training curricula have a semester of student teaching.

Candidates for the Bachelor of Arts degree may major in Biology, Chemistry, English, History, Physics, or Psychology. . .

Students must have approval of their departmental advisors in planning curricula.

PART-TIME GRADUATE STUDY

The Division of Graduate and Continuing Studies offers courses each semester of the academic year as well as in the summer to enable teachers in service to work for the degree of Master of Education or Master of Arts in the Teaching of English (MAT).

Applicants for the Master's Degree program submit a completed application form, a copy of their undergraduate transcript, and the

results of the Graduate Record Examination (aptitude section) given through the Educational Testing Service, Princeton, New Jersey. Inquiries concerning admissions procedures and the Graduate Record Examination may be addressed to the Dean of Graduate Study.

UNDERGRADUATE EVENING SESSION

Since 1963 a program leading to the Bachelor of Science degree in Industrial Science has been available to qualified high-school graduates now in business or industry.

In cooperation with the day division of the College, the Evening Session also offers a series of courses in a sequential development that helps part-time students work for degrees in Education or Liberal Arts. These courses are also open to day students. Such students realize that eventually they must transfer into the day division to complete the requirements of their degree. Additional information can be secured by writing the Director of the Evening College.

GENERAL EDUCATION

General Education is that portion of the college curriculum which introduces students to the intellectual experiences common to all educated men and women. This introduction is accomplished by the students' enrollment in a number of required and elective courses in the Humanities, Sciences, Mathematics, and Behavioral and Social Sciences.

Students in all curricula must fulfill the following requirements:

I

English Composition	*6 semester hours (or proven proficiency)
Speech	2 semester hours (or proven proficiency)
Health and Fitness	3 semester hours

To meet the requirements of Massachusetts laws (General Laws on Education, Chapter 3, Section 20) an examination on the federal and state (Massachusetts) constitutions must be taken or the course United States History and Constitution (3 semester hours) must be successfully completed.

II

The following minimum number of semester hours will be elected in three general education areas:

Mathematics or Science	12-16 semester hours
Humanities	15 semester hours
Social Sciences	15 semester hours

A list of the courses open as General Education electives is available prior to registration in each semester. Programs must be worked out with the help of departmental advisors assigned to students upon their entrance to college.

*Semester hours indicate the academic credit given for class meetings. Thus a college course meeting for three lecture hours a week for a semester (one half an academic year) carries three semester hours of credit toward graduation when successfully completed. Two hours of laboratory will equal one hour of lecture in terms of semester hours credit.

III

Also to be chosen from any General Education courses, including Physical Education activities: 6 to 8 semester hours.

IV

Only introductory courses may be used to satisfy both General Education and major course requirements; however, no more than 8 semester hours may be so used. No more than 8 semester hours in any discipline may be elected to satisfy general education requirements.

BEHAVIORAL SCIENCE SEQUENCE

The following Behavioral Science courses are common to all secondary education majors.

		Sem. Hrs.
B. Sci. 315	Adolescent Psychology	3
B. Sci. 410	Tests and Measurements	3
	Total	6 Sem. Hrs.

FOREIGN LANGUAGE REGUIREMENT FOR BACHELOR OF ARTS DEGREE AND ELEMENTARY EDUCATION SPECIALIZATION

To satisfy foreign language requirements for the Bachelor of Arts degree, students must be proficient at the second-year college level.

PROFESSIONAL SEQUENCE FOR ALL SECONDARY EDUCATION MAJORS

		Sem. Hrs.
ED 810	Trends in American Education	3
ED 600	Principles and Practices in Education	3
ED 860	Student Teaching in Secondary Schools	12
	Special Methods in Major Areas	3
	Total	21 Sem. Hrs.
ED 830 *	Reading in the Secondary School	3 Sem. Hrs.

*Required of English Majors only, who must complete 21 hours in their professional sequence.

SPECIALIZATION FOR ELEMENTARY MAJOR

All Elementary majors must select and complete a specialization from the following areas: Art, Foreign Language, Geography, History, Language Arts, Mathematics, Music, Science, Early Childhood Education, and Behavioral Science. Requirements for these specializations are found either under respective department headings or below.

Art Specialization: Students in the Elementary Curriculum who wish to specialize in Art may do so by electing the following under the guidance of the Art Department.

AR 302, 400, 410, 420, 430, 810
AR 310 or 320

Psychology Specialization: Students in the Elementary Curriculum who wish to specialize in Psychology may do so by electing 24 semester

hours of Psychology under the guidance of the Behavioral Science Department.

Required Courses:

BS 100, 210, 220*, 230*, 250, 350

Elect three courses from the following:

BS 240, 280, 290, 320, 340, 360, 410

*Elementary education students with a specialization in Behavioral Science must take either BS 220 Child Psychology or BS 230 Human Growth and Development, but not both.

Foreign Language Specialization: Students in the Elementary Curriculum who wish to specialize in French or Spanish may do so by attaining the minimum proficiency level of FR 222 or FR 332, or SP 222 or SP 332, and take either FR 880 or SP 880.

Language Arts and Early Childhood Specialization: Students in the Elementary Curriculum who wish to specialize in Language Arts or Early Childhood Education may do so by electing either of the following under the guidance of the Education Department.

1. Language Arts Specialization
   ED 400, 410
   EN 650
   BS 260, 290
2. Early Childhood Specialization
   ED 300, 410, 820
   EN 650

Music Specialization: Students in the Elementary Curriculum who wish to specialize in Music may do so by electing the following under the guidance of the Music Department.

MU 110, 210 (or equivalent), 820 or 800, 420, 430, 440, 450

Three semesters of any combination of MU 410 and/or 400

Two Music Electives

Science Specialization Program: Students in the Elementary Curriculum who wish to specialize in Science may do so by electing 15 semester hours of science under the guidance of the Biology or Chemistry or Physics or Science Departments. Those courses may not be used to satisfy General Education requirements.

Elect 15 hours from the following:

BI 101, 102, 120, 225, 230, 245, 250, 252, 254
CH 131, 132
GE 110, 200
PH 111, 112
SC 111, 121

SPECIFIC DEGREE REQUIREMENTS FOR MAJORS

Total semester-hour requirements for degrees in specific majors vary from department to department.

BACHELOR OF ARTS IN BIOLOGY

Degree Requirements

	Sem. Hrs.
General Education*	59
Biology * *	
BI 101	3
BI 120	4
BI 230	3
Biology Electives	21-27
Chemistry * * *	16
Mathematics	6
Physics	6
Foreign Language * * * *	6-12

BACHELOR OF SCIENCE IN EDUCATION BIOLOGY MAJOR

Degree Requirements

	Sem. Hrs.
General Education *	59
Biology * *	
BI 101	3
BI 120	4
BI 230	3
Biology Electives	21-27
Chemistry * * *	16
Mathematics	6
Physics	6
Professional sequence	21
Behavioral Science	6

*Courses waived by proficiency must be replaced by selection of free electives.

* *A minimum of 31 semester hours of Biology, 6 hours of which may be satisfied by General Education, is required of all majors.

* * *Eight semester hours of Chemistry may be satisfied by General Education.

* * * *See Foreign Language Requirements.

BACHELOR OF ARTS IN CHEMISTRY

Degree Requirements

	Sem. Hrs.
General Education*	59
Chemistry* *	
CH 111, 112	8
CH 140	1
CH 211, 212	10
CH 330	4
CH 350	3
CH 341, 342	8

CH 360 or 900	3
PH 301, 302	8
MA 230, 240	6
Free Electives* * *	16-18
Foreign Language * * *	6-12

BACHELOR OF SCIENCE IN EDUCATION
CHEMISTRY MAJOR

Degree Requirements

	Sem. Hrs.
General Education*	59
Chemistry* *	
CH 111, 112	8
CH 211, 212	10
CH 330	4
CH 350	3
CH 341	4
PH 301, 302	8
MA 230, 240	6
Behavioral Science Sequence	21
Electives	0-22

*Courses waived by proficiency must be replaced by selection of free electives.

* *A minimum of 29 semester hours of Chemistry, 8 of which may be satisfied by General Education, is required of all majors.

* * * See Foreign Language Requirements.

BACHELOR OF SCIENCE IN EDUCATION
ELEMENTARY CURRICULUM

Degree Requirements

	Sem. Hrs.
General Education*	59
Behavioral Science Sequence	
BS 220	3
BS 250	3
Professional Sequence	
ED 600	3
AR 800	3
ED 810	3
ED 860	12
IA 190	2
MA 883	3
MU 800	2

PE 080	0
PE 800	1
SC 810	3
ED 030	0
Electives* *	21

*Courses waived by proficiency must be replaced by selection of free electives.

* *All elementary majors must choose a specialization. Requirements are listed under the particular discipline.

BACHELOR OF ARTS IN ENGLISH

Degree Requirements

	Sem. Hrs.
General Education*	59
English * *	
EN 101, 102	6
EN 211, 212	6
English Electives	24
Free Electives* * *	27-29

*Courses waived by proficiency must be replaced by selection of free electives.

* *A minimum of 36 semester hours of English, 6 of which are General Education (EN 101, 102) and 6 of which may be from General Education, is required of all majors.

* * *See Foreign Language Requirements.

BACHELOR OF SCIENCE IN EDUCATION
ENGLISH MAJOR

Degree Requirements

	Sem. Hrs.
General Education*	59
English * *	
EN 101, 102	6
EN 211, 212	6
English Electives	18
Behavioral Science Sequence	6
Professional Sequence	24
Free Electives	6-18

*Courses waived by proficiency must be replaced by selection ot free electives.

* *A minimum of 30 semester hours of English, 6 of which are General Education (EN 101, 102) and 6 additional, which may be General Education, is required of all majors.

FOREIGN LANGUAGE SPECIALIZATION

Students in the Elementary Curriculum who wish to specialize in a foreign language may do so by electing 18 semester hours under the guidance of the Foreign Language Department from the foreign language offerings. These may not be used to satisfy General Education requirements.

BACHELOR OF SCIENCE IN EDUCATION

GEOGRAPHY MAJOR

Degree Requirements

	Sem. Hrs.
General Education*	59
Geography* *	
GE 100	3
Geography Electives	27
Behavioral Science Sequence	6
Professional Sequence	21
Free Electives	9-12

*Courses waived by proficiency must be replaced by selection of free electives.

* * A minimum of 30 semester hours of Geography, 3 of which may be satisfied by General Education, is required of all majors.

GEOGRAPHY SPECIALIZATION

Students in the Elementary Curriculum who wish to specialize in Geography, may do so by electing 15 semester hours of Geography under the guidance of the Geography Department, from the Geography elective offerings. These may not be used to satisfy General Education requirements.

BACHELOR OF ARTS IN HISTORY

Degree Requirements

	Sem. Hrs.
General Education*	59
History* *	
History Electives	36
Free Electives* * *	27-33

BACHELOR OF SCIENCE IN EDUCATION

HISTORY MAJOR

	Sem. Hrs.
General Education*	59
History Electives	30
History* *	

Behavioral Science Sequence	6
Professional Sequence	21
Free Electives	9-15

*Courses waived by proficiency must be replaced by selection of free electives.

* *A minimum of 36 semester hours of History, 6 of which may be satisfied by General Education, is required by all majors.

* * *See Foreign Language Requirement.

* * * *A minimum of 30 semester hours of History, 6 of which may be satisfied by General Education, is required of all majors.

HISTORY SPECIALIZATION

Students in the Elementary Curriculum who wish to specialize in History may do so by electing 15 semester hours of History under the guidance of the History Department, from the History elective offerings. These may not be used to satisfy General Education requirements.

BACHELOR OF SCIENCE IN EDUCATION

INDUSTRIAL ARTS MAJOR

	Sem. Hrs.
General Education*	59
Industrial Arts* *	
IA 100, 110, 120, 130 140, 150, 160, 170	16
IA 210, 220, 230, 240, 250, 260	18
IA 300	3
IA Electives	9
Behavioral Science Sequence	
BS 240	3
Professional Sequence	
IA 700, 710, 800, 850, 870	19
PL 200	3

*Courses waived by proficiency must be replaced by selection of free electives.

* *A minimum of 46 semester hours of Industrial Arts is required of all majors.

BACHELOR OF SCIENCE IN EDUCATION

MATHEMATICS MAJOR

	Sem. Hrs.
General Education*	59
Mathematics* *	

MA 110	3
MA 120	3
MA 230	3
MA 240	3
MA 300	3
MA 310	3
MA 340	3
MA 250	3
MA 260	3
MA 350	3
MA Electives* * *	3-9
Behavioral Science Sequence	6
Professional Sequence	21
Free Electives	6-12

*Courses waived by proficiency must be replaced by selection of free electives.

* *A minimum of 33 semester hours of mathematics, 6 hours of which may be satisfied by evidence of proficiency or General Education is required of all majors. MA 110 and MA 120 may be waived by showing proficiency on a placement test. Interested students should consult the Mathematics Department.

* * *Mathematics electives must be selected from the 300, 400 or 900 level courses in mathematics.

MATHEMATICS SPECIALIZATION PROGRAM

Students in the Elementary Curriculum who wish to specialize in Mathematics can do so by electing 21 semester hours of mathematics under the guidance of the Mathematics Department.

Required MA 101, 102 or 110, 120 - 6 hrs.
MA 200 - 3 hrs.

Elect four courses from the following:
MA 210, 230, 250, 260, 320, 330, 350, 360, CS 100

BACHELOR OF SCIENCE IN MEDICAL TECHNOLOGY

	Sem. Hrs.
General Education*	59
Biology* *	
BI 480	3
Biology Electives	10-16
Chemistry* *	10-16
Hospital Experience	32
Free Electives	0-12

*Courses waived by proficiency must be replaced by selection of free electives.

**A minimum of 19 semester hours of Biology and 16 semester hours of Chemistry is required. Six to 8 semester hours of each may be from General Education.

BACHELOR OF SCIENCE IN NURSING

Degree Requirements

	Sem. Hrs.
General Education*	59
Nursing**	
NS 101, 102	2
NS 201, 202	8
NS 230	3
NS 231, 232	2
NS 300	12
NS 310	12
NS 320	9
NS 410	12
NS 240	2
NS 340	2
NS 420	2
BI 111, 112* * *	6
BI 380	3
CH 131, 132* * *	6
BI 230	3

*Courses waived by proficiency must be replaced by selection of free electives.

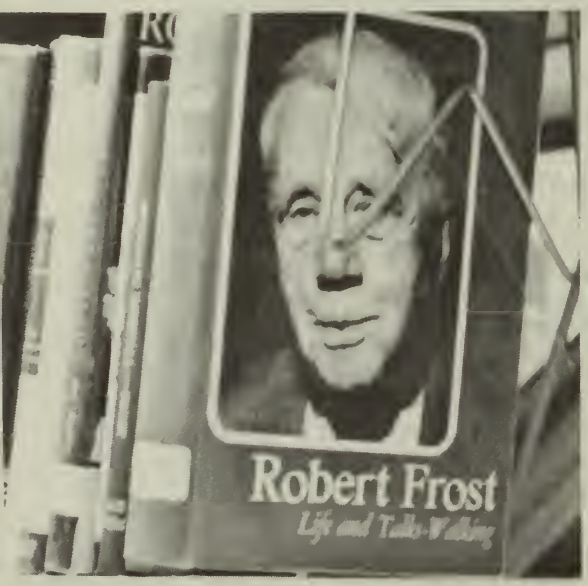
* *A minimum of 66 semester hours of Nursing is required of all majors. Students who are graduates of diploma and associate degree programs in Nursing may receive credit by examination for the following courses: NS 101, 102, 201, 230, 300 (8 sem. hrs.), 310 (8 sem. hrs.), 240. Such students are required to complete the following courses in addition to those for which they are not exempted: NS 300, 302, 310.

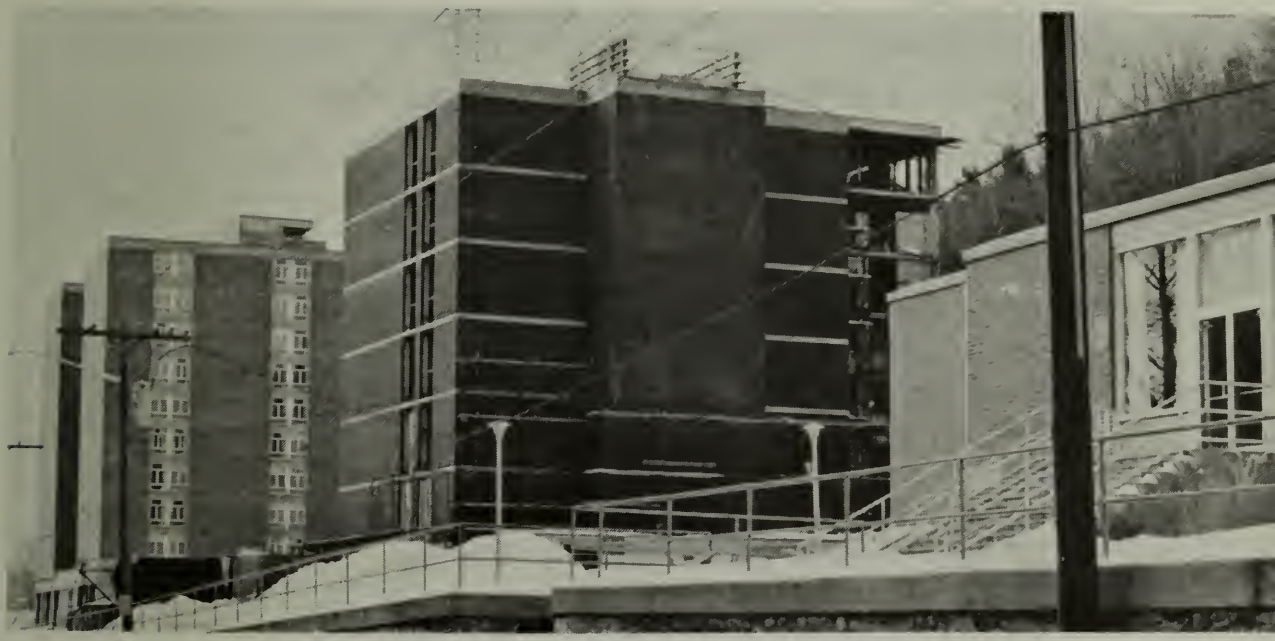
* * * BI 111, 112; CH 131, 132 should be fulfilled by General Education courses.

BACHELOR OF ARTS IN PHYSICS

Degree Requirements

	Sem. Hrs.
General Education*	59
Physics* *	


Robert Frost




5

PH 101, 111	8
PH 123	3
PH 221, 222	8
PH 201, 202, 203	9
PH 441	3
PH 411	3
PH 312	3
PH 321	1
One Physics course from:	
PH 331	3
PH 421	3
PH 431	3
MA 230, 240* * *	6
Foreign Language	6-12

BACHELOR OF SCIENCE IN EDUCATION

PHYSICS MAJOR

Degree Requirements

	Sem. Hrs.
General Education*	59
Physics* *	
PH 101, 111	8
PH 123	3
PH 221, 222	8
PH 401	3
PH 201, 202	6
PH 321	1
One Physics course from:	
PH 331	3
PH 421	3
PH 411	3
PH 431	3
MA 230, 240* * *	6
Professional	24

*Courses waived by proficiency must be replaced by selection of free electives.

* *A minimum of 28 hours of Physics, 8 of which may be fulfilled by General Education, is required of all majors.

* * *MA 230, 240 may be fulfilled under General Education.

BACHELOR OF ARTS OR SCIENCE IN PSYCHOLOGY

Degree Requirements

	Sem. Hrs.
General Education*	59
Psychology* *	
BS 100	3
BS 210	3
BS 220 or 230	3
BS 350	3
BS 300	3
BS 370	4
BS 400	3
Psychology Electives	15
Free Electives* * *	30

*Courses waived by proficiency must be replaced by selection of free electives.

* *A minimum of 34 semester hours of Psychology, not including General Psychology, which is a prerequisite for all Psychology courses, if required of all Psychology majors.

* * *See Foreign Language Requirements for the Bachelor of Arts.

COMMUNITY AND SOCIAL SERVICES SPECIALIZATION

Students who wish to specialize in community and social services may do so by taking the following required courses in addition to the 19 required semester hours in Psychology.

BS 105	3	BS 320	3
BS 205	3	BS 405	6
BS 315	3	Psychology Electives	12
BS 225	3	Free Electives	12

BACHELOR OF SCIENCE IN EDUCATION

SPECIAL EDUCATION MAJOR

Degree Requirements

	Sem. Hrs.
General Education*	59
Special Education* *	
SE 220, 230, 240	10
Behavioral Science Sequence	
BS 230, 250, 260, 280* *	12
Professional Sequence	
IA 180	3
SE 250, 260, 270, 400**	21

MU 810	3
AR 800	2
ED 030	0
PE 080	0
Free Electives	12

*Courses waived by proficency must be replaced by selection of free electives.

* *Students in the Special Education Curriculum who wish to specialize in the area of the Emotionally Disturbed may do so by making the following substitutions, under the guidance of the Special Education Department:

Replace BS 230 with BS 220, 340 and 360.

Replace SE 230, 240, 260 and IA 180 with SE 310 and 620.

COURSE DESCRIPTION AND DEPARTMENTAL REQUIREMENTS

Arabic numbers at end of course descriptions represent semester hours and clock hours in that order.

Example

AR 101 Survey of Art Forms I **3-3**

The 3-3 represents 3 semester hours, 3 clock hours.

The term **semester hour** is used to designate a class or equivalent laboratory unit meeting once.

ART

AR 101 Survey of Art Forms I 3-3
Significant art forms in Western Civilization from 1800 to the present.

AR 302 Survey of Art Forms II 3-3
Significant art forms in Western Civilization from the earliest times to 1800.

AR 310 Renaissance Painting 3-3
Western painting from 1250 to 1600 with emphasis on standards which dominated to the 20th century.

AR 320 American Art 3-3
Architecture, painting, sculpture and the decorative arts from Colonial times to the present.

AR 330 Issues in Contemporary Art 3-3
Seminar involving discussion and individual research and exploration using current media.

AR 400 Design 3-6
The pictorial elements: line, color, shape and texture as a preparation for the areas of drawing, painting and sculpture.

AR 410 Drawing 3-6
A studio course, emphasis being primarily upon the exploration of line and mass.

AR 420 Painting 3-6
An introduction to painting. Prerequisite: AR 410 or permission of the instructor.

AR 430 Advanced Painting 3-6
A continuation of AR 420 with a deepening emphasis upon individual problems. Prerequisite: AR 420.

AR 440 Pictorial Design 3-6
A studio course in painting with special emphasis upon formal structure. Prerequisite: AR 430.

AR 450 Sculpture 3-6
Experimenting with sculpture media emphasizing understanding of the basic principles of design and form.

AR 460 Advanced Sculpture 3-6
Continuation of AR 450 with a deepening emphasis upon individual problems. Prerequisite: AR 450.

AR 800 Art in Elementary Education 2-4
Practice of art as well as observation and discussion of the philosophy of art education in the elementary grades.

AR 900 Independent Study in Art 3 hours credit.
For selected students, upon approval of both department head and advising instructor.

BEHAVIORAL SCIENCE
(PSYCHOLOGY)

BS 100 General Psychology is prerequisite for all succeeding Behavioral Science courses.

BS 100 General Psychology 3-3

The science of human behavior. Scientific method, maturation, motivation, emotions, sensation, perception, learning, personality, adjustment.

BS 210 Advanced General Psychology 3-3

Continuation of BS 100. Includes research techniques, perception, motivation, personality theory, and language and communication.

BS 220 Child Psychology 3-3

Emphasis on the theories of development and, on application, in understanding and guiding the development of normal children.

BS 230 Human Growth and Development 3-3

Both the physiological and psychological development of the individual from conception to senescence.

BS 240 Adolescent Psychology 3-3

The significance of psychological factors in the adjustment of the adolescent to his peers, family, school and society.

BS 250 Tests and Measurements 3-3

Basic statistical concepts and techniques in measurement. Application of teacher-made tests, standardized tests and others.

BS 260 Introduction to Speech Pathology 3-3

Primarily intended to acquaint students with the profession of speech pathology, speech disorders and treatment of the disorders.

BS 270 Educational Psychology 3-3

Application of psychological principles to the educative process.

BS 280 Principles of Guidance 3-3

Introductory course for teachers or persons planning specialization. Nature, scope and purpose of guidance services. Counselling, special methods and materials.

BS 290 Psychology of Speech and Communication 3-3

Primarily intended to acquaint students with a broader appreciation of speech, language, and communication.

BS 300 Psychological Statistics 3-3

Development of individual competence in statistical treatment of data. Emphasis on descriptive statistics with introduction to tests of significance.

BS 310 Psychological Testing 3-3

Laboratory experiences in the administration and interpretation of group and individual tests, resulting in a self-case study.

BS 320 Social Psychology 3-3

Psychological constructs and concepts applied to the interaction between human beings.

BS 330 Learning Problems in Urban Schools 3-3

Ways schools can bridge the gap between cultural difficulties and school experiences.

BS 340 Abnormal Psychology 3-3

neuroses, psychoses and conduct disorders.

Nature of emotional disturbances and presentation of the major

BS 350 Psychology of Learning 3-3

Nature and fundamental principles of learning. Effective learning procedures and conditions.

BS 360 Psychology of Personality 3-3

Dynamic factors in personality formation are followed through approximate sequences of the life periods. Major theories and assessment.

BS 370 Experimental Psychology 4-4

Study of current literature in human behavior. Participation in projects and experimental problems. Prerequisite: BS 100 and BS 300.

BS 400 Seminar in Psychology 3-3

Systematic analysis of contemporary problems in semester to semester. Prerequisite: Senior standing and consent of the instructor.

BS 410 Independent Study 3 class hours

Prerequisite: Approval of both department head and advising instructor.

(SOCIOLOGY)

BS 105 Introduction to Sociology 3-3

Structure and process in the organization of groups, with consideration of development, maintenance and change variables.

BS 205 Urban Sociology 3-3

The structure and function of cities in history and modern life.

BS 225 Sociology of the Family 3-3

Structure and function of the family; trends and practical solutions to problems in family living.

BS 315 Community Analysis 3-3

The community as a social system. Field Study: observation and analysis of local communities.

BS 405 Introduction to Social Services 6-6

Concepts and methods in social work. Practical training experience through community agency settings.

BIOLOGY

BI 101 Introductory Biology I 3-4

A general education course emphasizing those aspects of biology that are critical to an understanding of man in the biosphere.

BI 102 Introductory Biology II 3-4

Continuation of BI 101.

BI 111 and 112 Anatomy and Physiology 3-4

The structure and physiological mechanisms of the human organism at the cellular, tissue, and organ level.

BI 120 General Zoology 4-6

The fundamental principles underlying animal life. Prerequisite: BI 101 and 102 or permission of instructor.

BI 115 Anatomy and Physiology 4-6

The structure and function of the human organism.

BI 225 Marine Biology 3-3

The physical, chemical, and biological factors in the marine environment. Field trips. Prerequisite: BI 101 or permission of the instructor.

BI 227 Parasitology 3-4

The morphology of representative groups of parasitic protozoa, helminths, and arthropods, and their functional relationships to the animal and human hosts. Prerequisite: BI 120; upper-class status.

BI 228 Embryology 3-4

Cellular morphogenesis, metabolism, differentiation. Emphasis on tissue interaction and physiological and biochemical mechanisms. Prerequisite: BI 101.

BI 230 General Botany 3-4

Emphasis on representative thallophytes, bryophites and vascular plants, their biology, evolutionary development, and importance to man. Prerequisite: BI 101.

BI 235 Plant Physiology 3-4

The function of plant cells, tissues, and other structures. Prerequisite: CH 201.

BI 245 Laboratory Techniques in Biology 3-4

Techniques, procedures, demonstrations, experiments, and other activities performed in biology laboratories. Prerequisite: BI 101.

BI 250 Conservation of Natural Resources (second semester) 3-4

The maintenance of environmental quality and productivity. Field and laboratory work provides outdoor-oriented conservation material. Prerequisite: BI 101 or permission of the instructor.

BI 252 Introductory Ecology 3-4

Basic ecological principles. Field work and laboratories emphasize local communities and provide practice in the use of taxonomic keys. Prerequisite: BI 101 or permission of instructor.

BI 253 Advanced Ecology 3-4

Emphasis on quantitative study of phenomena such as population relationships, productivity, energetics and community structure. Prerequisite: Permission of instructor.

BI 254 Ornithology 3-4

Introduction to avian biology. Prerequisite: BI 101 or permission of instructor.

BI 265 Genetics 3-4

Principles of heredity in animals, plants and microorganisms. Laboratory involves breeding experiments. Prerequisite: BI 101, CH 111.

BI 270 BSCS Biology 3-4

BSCS materials used and evaluated. Laboratory course dealing with the basic themes of biological science. Prerequisite: Upper-class status and permission of instructor.

BI 280 Survey of Microorganisms 3-4

Principles and practical aspects of microbiology. CH 111, BI 111 or permission of instructor.

BI 290 History of Biology 3-3

Origins, development and present status of Biology. Two hours lecture and one hour discussion. Prerequisite: BI 101.

BI 340 Cell Structure and Function 3-4

Physiology. Organization, distribution and function of cellular inclusions. Prerequisite: BI 101 and CH 201.

BI 400 Independent Research 1 to 3 hours credit

BI 480 General Microbiology 3-4

The structure, function, development, physiology, classification and identification of microorganisms. Prerequisite: BI 101, CH 201.

BI 580 Biology Methods 3-3

Philosophy and methods of modern science teaching. (Required of all Biology education majors plus 30 semester hours in Biology.)

CHEMISTRY

CH 111 General Chemistry I 4-5

The fundamental laws and theories of chemistry. Chemical calculations are emphasized.

Chem. 112 General Chemistry II 4-5

Continuation of (and prerequisite:) CH 111 or the equivalent.

Emphasis on theory and application of Quantitative Analysis. Prerequisite: CH 111 and 112 or the equivalent.

CH 341 Physical Chemistry I 4-5

The underlying principles of chemistry from a physical chemistry standpoint. Prerequisite: CH 330 or the equivalent.

CH 342 Physical Chemistry II 4-5

Continuation of (and prerequisite): CH 331.

CH 120 General Chemistry for Nurses 3-4

One semester course with emphasis on nursing application. By permission of instructor.

CH 131 Chemistry I 3-4

Fundamentals of chemistry for non-science majors.

CH 132 Chemistry II 3-4

Continuation of (and prerequisite): CH 131 or the equivalent.

CH 140 Qualitative Analysis 1-2

Includes the separation and identification of inorganic cations and anions, with particular emphasis on the chemical principles involved. Prerequisite: CH 111 or the equivalent.

CH 201, 202 Organic Chemistry I and II 4-5

The first half of the course deals with the correlation of structure and reactivity, interconversion of functional groups and structure determination. The second semester continues CH 201 with increased emphasis on reaction mechanisms. Prerequisite: Successful completion of CH 111 and 112 or the equivalent.

CH 211, 212 Organic Chemistry I and II 5-7

Same as CH 201 and 202 except that an additional laboratory period is required. Required of all chemistry majors.

CH 220 Biochemistry 3-4

Introduction to the chemistry of carbohydrates, fats and proteins. The metabolic processes of living things. Required of Biology majors in sophomore year. Prerequisite: CH 201 and 202 or the equivalent.

Chem. 330 Quantitative Analysis 4-6

CH 350 Instrumental Analysis 3-5

Essentially a laboratory course in Instrumental Analysis. Prerequisite: CH 342 or the equivalent.

CH 360 Advanced Inorganic Chemistry 3-3

Valency theories, acid-base theories, reactions in non-aqueous solvents, complexation and chelation, physical measurements. Prerequisite: CH 341 and 342 or the equivalent.

CH 900 Independent Study in Chemistry 3-6

Laboratory research under guidance of the Chemistry staff. Prerequisite: Permission of the instructor.

COMPUTER SCIENCE

C.S. 100 Computer Programming 3-3

Computer programming using Fortran and Forgo languages. Mathematics assumed, algebra and trigonometry. May be used for mathematics or physics credit.

C.S. 201 Data Processing I 3-3

Assumes knowledge of Fortran. Methods of numerical integration, differentiation, and interpolation. Prerequisite: Two semesters of calculus.

C.S. 202 Data Processing II 3-3

Solution of simultaneous equations, series approximation, curve fitting, operations with matrices.

ECONOMICS

EC 220 Introductory Economics 3-3

Organization and functions of economic society and the interrelated process of production, distribution and consumption. Current problems are emphasized.

EDUCATION

ED 030 Handwriting Once a month, no credit

Standard handwriting course required of students in the Elementary and Special Education curricula.

ED 300 Early Childhood 3-3

Culture, research, sociology and psychology. A guide for teaching children ages 3-5.

ED 310 Methods and Materials of Early Childhood Education 3-3

Physical, social, emotional development of children 3-8. Methods and activities; evaluation of teaching techniques. Prerequisite: ED 300.

ED 400 Improvement of Reading

Each student is assigned an individual child who has a reading problem. Prerequisite: ED 830.

ED 410 Language Arts in the Elementary School 3-3

The four aspects of a total program in Language Arts: listening, speaking, writing and creativity. Prerequisite: BS 400.

ED 500 Instructional Media Techniques 3-3

A basic study of the effective selection, use and evaluation of various types of instructional media for all classroom areas.

ED 600 Principles and Practices in Education 3-3

Required of all Education majors. Definitions, and systematic training in the achieving of educational goals. Prerequisite: BS 400.

ED 810 Trends in American Education 3-3

An historical study with emphasis on current practices and trends at both Elementary and Secondary levels. Required of Secondary Education majors.

ED 820 Case Studies of Young Children 3-3

Behavior and personalities of children. Student undertakes systematic studies involving gathering-interpreting data.

ED 830 Reading in the Elementary School 3-3

Problems and methods of teaching reading in the primary and elementary grades. Many basic reading series are studied. Prerequisite: BS 400.

ED 840 Reading in the Secondary School 3-3

Curriculum development material and nature of reading. Required of Secondary curriculum English majors. Prerequisite: BS 240, ED 600.

ED 860 Student Teaching in Elementary Education 12-25

Each student is required to have a full semester of student teaching consisting of two experiences at the elementary education level.

ED 870 Student Teaching in the Secondary School 9 credit hours

Students are assigned to a laboratory school for a semester of student teaching.

SPECIAL METHODS IN MAJOR AREAS

These courses emphasize curriculum development, materials and any methods that are peculiar to the specific subject-matter major. They will be found under the specific subject headings.

Example: HI 881, 882 Special Methods in Teaching of History.

ENGLISH

EN 101 English Composition I 3-3

Practice, both oral and written, in expressing ideas with precision, clarity and economy. Critical reading.

EN 102 English Composition II 3-3

Essentially a continuation of EN 101 but more advanced. Logic, vocabulary of criticism, the research essay. Prerequisite: a passing grade in EN 101.

EN 201 American Literature I 3-3

Representative American writers from Colonial days through the Civil War.

EN 202 American Literature II 3-3

Representative American writers since the Civil War.

EN 211 English Literature I 3-3

British writers from the Old English period through the early Romantic writers of the late 18th century.

EN 212 English Literature II 3-3

British writers since the Romantic movement.

EN 221 World Literature I 3-3

European literary masterpieces from the beginning through the middle of the 17th century.

EN 222 World Literature II 3-3
European literary masterpieces from the mid-17th century to the present.

EN 300 World Drama 3-3
Significant and representative plays from the beginning to the modern period.

EN 310 Modern Drama 3-3
The works of such playwrights as Ibsen, Chekhov, Sartre, Brecht, Ionesco.

EN 320 The Novel Before World War I 3-3
Significant novels representing various countries and periods as well as stages in the development of this literary form.

EN 330 The Modern Novel 3-3
Modern novels of different nations are studied both aesthetically and as human documents.

EN 340 The Short Story 3-3
The episode, tale and novella both as art forms and human documents.

EN 350 Modern Poetry 3-3
Representative modern poetry with the emphasis on American and English poets.

EN 360 History of Literary Criticism 3-3
Critical theory and practice from Aristotle through the 19th century.

EN 370 Modern and Contemporary Criticism 3-3
Varied theories and practice. Complements History of Literary Criticism but either may be taken independently of the other.

EN 400 The Middle Ages 3-3
Literary forms that made their first appearance after the emergence of Middle English. Much attention to Chaucer.

EN 411 Chaucer I 3-3
The Canterbury Tales.

EN 412 Chaucer II 3-3
The long and short poems and some of the prose, exclusive of **The Canterbury Tales.**

EN 420 Early Seventeenth Century Literature 3-3
English literature from 1600 through 1660.

EN 430 Elizabethan Literature 3-3
The main characteristics of Renaissance and Elizabethan literature.

EN 441 The Early Shakespeare 3-3
Tragedies, comedies and English chronicle histories of Shakespeare's youth.

EN 442 The Later Shakespeare 3-3
Mature comedies and tragedies. This course complements the Early Shakespeare but either may be taken independently of the other.

EN 450 Late Seventeenth-Century Literature 3-3
English literature from 1660 through 1700.

EN 460 Milton 3-3
The English poems including **Paradise Lost**, and some prose.

EN 471 Early Eighteenth-Century Literature 3-3
English literature from 1700 through 1745.

EN 472 Late Eighteenth-Century Literature 3-3
English literature from 1745 through 1800.

EN 480 Literature of the Romantic Period 3-3
Wordsworth, Coleridge, Byron, Shelley, Keats. Minor authors such as Lamb and Hazlitt.

EN 490 Victorian Prose 3-3
Works of Victorian men of letters studied for greater understanding of the aesthetic, spiritual and social development of the period.

EN 500 Victorian Poetry 3-3
Tennyson, Arnold, Browning and minor poets including the pre-Raphaelites.

EN 510 The Nineteenth-Century English Novel 3-3
Significant novels demonstrating the changing cultural milieu and varying approaches of the genre during this period.

EN 520 Decadence and Transition 3-3
Victorian literary standards collated with modern trends in poetry, prose, drama.

EN 530 Major American Writers of the Twentieth Century 3-3
The varied creativity of American writers of fiction, drama, poetry, criticism, and the essay since World War I.

EN 540 The American Novel Since 1945 3-3
A close analysis of seven or eight major novels.

EN 550 Novels of Politics and Revolution 3-3
Such novelists as Stendhal, Dostoevski, James, Zola, Conrad and others.

EN 560 The Black Author in the Modern World 3-3
Mainly U.S. writings.

EN 570 British and American Humor 3-3
Comic writing in the fields of nonsense, fantasy, allegory and satire.

EN 580 Twentieth-Century Irish Literature 3-3
Synge, Yeats, Joyce, O'Flaherty, O'Connor and O'Faolain, with some attention to minor figures of the so-called Irish Literary Renaissance.

EN 591 Russian Literature in Translation I 3-3
A treatment of the general principles of the 18th, 19th and 20th century Russian writers.

EN 592 Russian Literature in Translation II 3-3
Continuation of EN 591.

EN 600 Advanced Composition 3-3
Conducted as a writer's workshop. Stresses non-fictional prose.

EN 610 Creative Writing 3-3
For outstanding students who have completed EN 101 and 102. Upon approval of instructor.

EN 620 Historical Development of the English Language 3-3
The nature and development of the English Language, and its relation to other languages.

EN 630 The Structure and Nature of Language 3-3

The study of language systems; traditional-structural-transformational-generative views of structure; current theories of acquisition; psycholinguistic and sociolinguistic problems.

EN 640 Rhetoric: The Management of Discourse 3-3

The study of kinds of discourse; the roles of speaker-subject-audience; the applications of logic.

EN 650 Children's Literature 3-3

Criteria for evaluation; story-telling; sources; book clubs; book fairs; school and classroom libraries; related areas.

EN 660 Books and Related Materials for Young People 3-3

The outstanding literature, with guides to its selection and use.

EN 881 The Teaching of English I 2-2

The methodology of English (lesson planning, selection of materials, curriculum development, review of relevant research).

EN 882 The Teaching of English II 1-1

Continuation of (and prerequisite): Eng. 881.

Eng. 900 Independent Study 3-3

For English majors excelling in scholarship, upon approval of both department head and advising instructor.

FOREIGN LANGUAGES

A placement test is given prior to the beginning of the fall semester and must be taken by students to determine their level of proficiency in a specific language beyond the elementary level.

(FRENCH)

FR 101 French for Beginners 4-5

Correct pronunciation, reading ability, and fundamentals of grammar and syntax. French gradually becomes the working classroom and laboratory language.

FR 102 French for Beginners 4-5

A continuation of FR 101.

FR 111 French I Intermediate 4-5

Conversation and laboratory practice; readings stressing life, customs, and culture of France. Prerequisite: Two years of high school French or FR 101 and 102 and/or satisfactory score on Placement Test.

FR 112 French II Intermediate 4-5

A continuation of FR 111.

FR 221 French Civilization I 3-3

Development of the French nation as revealed in its history, geography and basic institutions through modern literature. Prerequisites: Placement Test or completion of FR 112 and/or instructor's permission. (Course conducted in French.)

FR 222 French Civilization II 3-3

A continuation of FR 221.

FR 331 French Literature I 3-3

A survey of the main currents of French literature from the Middle Ages through the 18th century. Prerequisite: Placement Test or completion of FR 112 and/or instructor's permission. (Course conducted in French.)

FR 332 French Literature II 3-3

A survey of the main currents of French literature of the 19th and 20th centuries. Prerequisite: Placement Test or completion of FR 112 and/or instructor's permission. (Course conducted in French.)

FR 880 Methods for Teaching French in the Elementary School 3-3

Techniques and materials for use in elementary school. Prerequisite: Minimum of 12 semester hours beyond beginners' level and permission of instructor.

FR 900 Advanced French Independent Study 3-3

Prerequisite: Minimum of 12 semester hours, 2 grade-average (in French) and permission of instructor.

(GERMAN)

GR 101 German for Beginners 4-5

German gradually becomes the working classroom and laboratory language.

GR 102 German for Beginners 4-5

Continuation of GR 101.

GR 111 Intermediate German 4-5

Readings stress life, customs, and culture of Germany. Prerequisite: Two years of high school German or GR 102 and/or satisfactory score on Placement Test.

GR 112 Intermediate German 4-5

Continuation of GR 111.

GR 221 German Civilization 3-3

History, geography, literature, fine arts from Holy Roman Empire through today. Given in German. Prerequisite: GR 111, 112; and/or placement test; and/or permission of instructor.

GR 222 German Civilization 3-3

Continuation of GR 221.

GR 331 German Literature through Goethe 3-3

Representative works up to and including Goethe. Conducted in German. Prerequisite: Placement Test or completion of GR 112 and/or instructor's permission.

GR 332 German Literature since Goethe 3-3

Continuation of GR 331.

(RUSSIAN)

RU 101 Russian for Beginners 4-5

Aural-oral approach to pronunciation, reading, fundamentals of grammar and syntax. Russian gradually becomes the working classroom and laboratory language.

RU 102 Russian for Beginners 4-5

Continuation of RU 101.

RU 111 Russian I Intermediate 4-5

Remedial pronunciation, grammar variety, conversation and laboratory practice. Readings stress U.S.S.R. life, customs, culture. Russian is the working language.

RU 112 Russian II Intermediate 4-5
Continuation of RU 111.

(SPANISH)

SP 101 Spanish for Beginners 4-5
Spanish gradually becomes the working classroom and laboratory language.

SP 102 Spanish for Beginners 4-5
A continuation of SP 101.

SP 111 Spanish I Intermediate 4-5
Readings stress life, customs, and culture of Spain and Spanish America. Prerequisite: Two years of high school Spanish (or SP 101 and 102) and/or satisfactory score on Placement Test.

SP 112 Spanish II Intermediate 4-5
A continuation of SP 111.

SP 221 Spanish Civilization I 3-3
Spanish culture as evidenced in Spain and Spanish America through modern representative literature; conducted in Spanish. Prerequisite: Placement Test or completion of SP 111 and 112 and/or instructor's permission.

SP 222 Spanish Civilization II 3-3
Continuation of SP 221.

SP 331 Spanish Literature I 3-3
Conducted in Spanish. A survey of Spanish and Spanish Literature. Prerequisite: Placement Test or completion of SP 111 and 112 and/or instructor's permission.

SP 332 Spanish Literature II 3-3
A continuation of SP 331.

SP 880 Methods for Teaching Spanish in the Elementary School 3-3
Techniques and materials for use in elementary school. Prerequisite: Minimum of 12 semester hours beyond beginners' level and permission of the instructor; 2 grade average in Spanish.

GEOGRAPHY

GE 100 Introduction to Geography 3-3
The interrelationships between the physical and cultural elements of man's environment.

GE 110 Geology 3-4
An introductory survey of the basic elements of physical and historical geology. Laboratory required. Open to all students.

GE 200 Elements of Weather 3-3
Fundamental principles of weather and climate, with applications to regional patterns and human settlement.

GE 210 Climatology 3-3
Study of the climate regions. Latitude, pressure cells, mountain barriers, water bodies, ocean currents, winds in climate development.

GE 220 Geomorphology 3-3
A comprehensive study of land forms and their origins. Prerequisite: GE 100 or 110.

GE 300 Economic Geography 3-3

Basic geographic factors involved in the production, distribution, and consumption of the major commodities of the world. Prerequisite: GE 100.

GE 310 Political Geography 3-3

Dependent and independent political units (colonies, protectorates, trust territories, commonwealths, countries), boundary disputes, strategic areas, buffer zones, international organizations.

GE 400 Map and Aerial Photograph Interpretation 3-3

Practical work with maps, particularly topographical quadrangles. Stereoscopic examination and interpretation of aerial photographs. Introduction to other remote sensing techniques.

GE 410 Geography of the United States and Canada 3-3

A regional analysis emphasizing the nature of these two industrialized, urbanized countries. Prerequisite: GE 100.

GE 430 Geography of Latin America 3-3

The countries and colonies of Latin America; historical background, political status, physical and climate regions, agricultural and economic position, international relations. Prerequisite: GE 100.

GE 440 Geography of Europe 3-3

A regional analysis of the countries of Europe based on the geographic elements influencing their evolution and international relationships. Prerequisite: GE 100.

GE 450 Geography of Asia 3-3

Geographic factors which have played a part in the development of internal and external problems facing Asian nations today. Prerequisite: GE 100.

GE 460 Geography of Africa 3-3

The economic, political, historical, and cultural development of the countries of Africa in relation to their physical environment. Prerequisite: GE 100.

GE 470 Geography of Oceania 3-3

A systematic analysis of Australia, New Zealand, Indonesia, the Philipines an the island groups of the Pacific Ocean.
Prerequisite: GE 100.

GE 881, 882 Special Methods in Teaching Geography 2-2, 1-1

Lesson planning, selection of materials, curriculum development, review of relevant research.

GE 900 Independent Study in Geography 3-3

Provides exceptional students the opportunity of research with staff guidance in a subject or problems of geographic significance. Limited to seniors.

HISTORY

Prerequisites: HI 211 and 212 or permission of the instructor is required for all courses in United States History. HI 101 and 102 or permission of the instructor is required for all courses in European History.

HI 101 History of Western Civilization I 3-3

Political, social, and cultural trends in the development of Western Civilization from the Renaissance to 1815.

HI 102 History of Western Civilization II 3-3

Continues HI 101 for 1815 to the present. With HI 101 provides a background for humanities and social science courses.

HI 103 The Far East 3-3

East Asian civilization, with emphasis on China and Japan. Intended for students with little or no background in the subject.

HI 104 British History 55 B.C. to 1603 A.D. 3-3

The Picts and Celts; the Roman conquest and withdrawal; the Angles, Saxons, Danes, and Normans; the Angevin and Tudor periods.

HI 105 British History 1603 to the Present 3-3

Stuarts, Cromwell, Restoration; colonial period; industrial age; world empire. World Wars I and II.

HI 200 United States History and Constitution 3-3

The major forces in the development of the American heritage from the Revolutionary War to the present.

HI 211 United States History I 3-3

Begins with colonial times and terminates with the period of Reconstruction.

HI 212 United States History II 3-3

Continuation of HI 211. From Reconstruction.

HI 300 American Colonial History 3-3

Exploration, settlement patterns, imperial system, social structure, rise of representative government in America, and the 18th century wars for empires.

HI 310 Era of the American Revolution 3-3

Coming of the Revolution, war tactics and strategy, Confederation problems and the American Constitution.

HI 320 The American Civil War and Reconstruction 1850-1865 3-3

Politics, slavery, and Lincoln's rise to power; political, military and diplomatic aspects of the war; failure of reconstruction.

HI 331 The United States in the Twentieth Century I 3-3

Events, personalities, and problems of the period from 1900 to the coming of the New Deal.

HI 332 The United States in the Twentieth Century II 3-3

A continuation of Hist. 331 from the New Deal to the present.

HI 340 The Frontier in American History 3-3

The Frontier studied as a historical, social, economic, and psychological process to determine its impact on American development.

HI 350 The Economic History of the United States 3-3

Agricultural, financial, commercial, and technological development of the United States from colonial times to the present.

HI 361 United States Industrial History I 3-3

The industrialization and urbanization of the United States from colonial times to 1870.

HI 362 United States Industrial History II 3-3

A continuation of HI 361 from 1870 to the present.

HI 371 United States Diplomatic History I 3-3

The first century of American foreign relations, from Franklin to Seward.

HI 372 United States Diplomatic History II 3-3
America's emergence as a great power on a shifting world stage.

HI 381 American Social and Intellectual History I 3-3
The history of ideas in America from the 17th century to the present.

HI 382 American Social and Intellectual History II 3-3
A continuation of HI 381.

HI 400 History of Mexico, Central America and the Caribbean 3-3

HI 410 History of South America 3-3
Both HI 400 and 410 survey pre-Columbian and colonial backgrounds, the clash and fusion of cultures and the evolution of today's Latin American civilizations as they related to specific geographical areas.

HI 500 Byzantine History 3-3
The development of the concept of a "Second Rome"; Julian the Apostate; Moscow as the "Third Rome."

HI 511, 512 Medieval European History I and II 3-3 each semester
Political and cultural history of the Mediterranean and European world from the fall of the Roman Empire to the Renaissance.

HI 520 Nineteenth-Century Europe 3-3
Political, social, and cultural trends from the outbreak of the French Revolution to the beginning of World War I.

HI 530 Twentieth-Century Europe 3-3
From the first World War to the 'sixties.' Cultural, scientific, and social developments as well as domestic and international politics.

HI 540 Tudor and Stuart England 1485-1689 3-3
Henry VII to the Glorious Revolution. The Reformation, the religious settlement under Elizabeth I, Puritanism, overseas exploration, evolution of government.

HI 550 Modern German History 3-3
Germany since ca. 1500 with emphasis on the last two centuries and Germany's role in international politics.

HI 560 Russian History to 1905 3-3
Founding of the Kievan State; the Mongol, Muscovite, and Imperial periods to the revolution of 1905.

HI 570 Russian History to the Present 3-3
The Bolshevik seizure of power; attempts to implement Marxist theory; institutional development of the state, family, education, religion.

HI 600 History of Imperialism 3-3
Relations between Europe and the non-European world through the periods of expansion, Western dominance, and nationalist uprisings against colonialism.

HI 881, 882 Special Methods in Teaching of History 2-2, 1-1
Special techniques for the teaching of history, and their relationship to the principles of general methods.

HI 900 Independent Study in History 3 credit hours
Open to seniors majoring or specializing in history with permission of the department.

INDUSTRIAL ARTS

IA 100 General Shop I 2-4

Methods and procedures of conducting teaching units in a multiple-activity shop. Units normally carried on in teaching-training assignments.

IA 110 Introduction to Wood 2-4

The making of household accessories. A study of tools, materials, mechanics, processes and design.

IA 120 Introduction to Metals 2-4

Chemical metallurgy of selected metals, the use of precision measuring tools, sheetmetal fabrication, foundry practices, bench processes.

IA 130 Introduction to Typography 2-4

Comparison of printing methods in visual communication. Latin alphabet, typography, design-layout, terminology, point system, inks, plates, presses, papermaking, proofmarks.

IA 140 DC Circuit Fundamentals 2-4

Principles of DC electricity experimentally applied to circuits, devices and wiring problems.

IA 150 History of Power Mechanics 2-4

Man's endeavor to harness the forces of nature to meet his ever-increasing demand for power. Students construct a model in prime movers.

IA 160 Introduction to Drawing 2-4

Lettering, dimensioning, orthographic projection, symbols, sectioning, isometric and auxiliary views. Problem development and blueprint reading.

IA 170 Introduction to Design 2-4

Through a series of compositional assignments students are introduced to two-dimensional and finally three-dimensional form.

IA 180 Industrial Arts for Special Education 2-4

Rudiments of planning, drawing, and construction for teaching aids and projects. Knowledge of tools, materials and processes.

IA 190 Instructional Material in Elementary Education 2-4

Effective selection, use and evaluation of various types of instructional media.

IA 200 General Shop II 3-6

Laboratory experiences with common theories and practices of the general shop.

IA 210 Furniture Making 3-6

Individual pieces of small furniture are designed, constructed and finished. Advanced concepts and techniques are taught.

IA 220 Machine Shop Processes 3-6

Metalworking machine tools and processes, as well as arc welding. Design and fabrication of products which involve skill in machining and welding.

IA 230 Graphic Arts Unit Teaching 3-6

Investigation of a significant graphic arts product. Problem-centered group activity leading to unit booklet involving photography, visual aids, bookbinding, printmaking.

IA 240 AC Circuit Fundamentals 3-6

Principles of AC electricity and electromagnetism and their applications in circuitry, motors, transformers and other devices.

IA 250 Internal Combustion Engines 3-6

Emphasis on the break-down, study, reassembling, testing, and adjusting of various types of engines.

IA 260 Engineering Drawing 3-6

Continuation of fundamentals in the field of intersection and developments, revolutions, axonometrics, assembly, and detail drawing.

IA 300 Structures 3-6

Basic principles and assumptions of structural design, including drawing and models. Load tests determining reactions, shears, bending moments, stresses.

IA 310 Production Furniture 3-6

Production of a piece of furniture employing jigs, fixtures and suitable mass-production procedures. Appropriate methods of production management.

IA 320 Advanced Machine Shop Processes 3-6

Empasizing increasing skill in selected areas of metalworking and broadening knowledge of machine operation. Oxy-acetylene welding of ferrous metals.

IA 330 Offset-Lithography 3-6

Problems of design, pasteups, repros, camera, stripping, platemaking, press operation. History, color, halftones, stock selection, chemistry of ink on paper.

IA 340 Radio Theory and Practice 3-6

Basic electronic principles and their applications in radio circuitry. Construction and testing problems.

IA 350 An Introduction to Flight 3-6

History and physics of flight, supersonic flight, rocket-propulsion and course development for high-school level.

IA 360 Descriptive Geometry 3-6

Abstract and practical problems are worked out graphically. The concept of locus.

IA 370 Advanced Design 3-6

Students develop individual design projects and follow through to a completed design module. Prerequisite: IA 170 or equivalent course.

IA 400 Research in Industrial Materials 3-6

Standard tests and procedures and laboratory tests to determine the properties of materials.

IA 410 Woodworking Technology 3-6

Tool and machine shop maintenance, designing and making teaching aids, and experimentation in wood technology and project development. For skilled woodworkers.

IA 420 Elements of Metallurgy 3-6

The physical metallurgy of common metals, involving heat treatment, crystallization, slip, workhardening, corrosion and microscopic inspection of selected specimens.

IA 430 Problems of Service Printing 3-6

Supporting role of graphic arts. Job scheduling, planning, ordering stock, estimating. Heidelberg and Davidson operation. Textbooks, curriculum problems, shop layout.

IA 440 Transistors, FM, Test Equipment 3-6

FM receivers, transistor circuitry, power supplies, test equipment and various electronic devices. Constructional and experimental experiences.

IA 450 Power Mechanics Projects Development 3-6

To research, design, finance and construct a project that has been approved by the instructor.

IA 470 Ceramics 3-6

Includes throwing on the wheel. Glazing techniques. A strong emphasis on three-dimensional sculptural form.

IA 700 Foundations of Industrial Arts I 2-2

Educational theories, social and academic setting, and leaders of each period of Industrial Arts history from manual training to the present.

IA 710 Foundations of Industrial Arts II 3-4

Curriculum theories and their application to the structure and organization of Industrial Arts in general education.

IA 800 Principles and Practices in Industrial Arts 3-3

Principles underlying methods of planning and guiding learning activities in Industrial Arts teaching.

IA 850 Student Teaching in Industrial Arts 9-18

Each student is responsible for teaching classes either in the campus junior high school or public school shops under supervision.

IA 870 Seminar in Industrial Arts 2-2

Principles and practices of shop administration, including shop planning, finances, equipment, storage maintenance, law.

IA 900, 970 Independent Study in Various Shops 3 hours credit

Open to juniors and seniors with approval of instructor and departmental chairman.

MATHEMATICS

MA 101 and 102 College Mathematics I, II 3-3 each

The topics in this two-semester course are selected from algebra, trigonometry, analytic geometry and calculus. MA 101 is a prerequisite for MA 102.

MA 110 Alegebra 3-3

The structure of Algebra is emphasized. Topics include real numbers, fields, linear equations and inequalities, quadratic polynomials and complex numbers.

MA 120 Elementary Functions 3-3

General properties of functions are applied to the study of polynomial, circular, and exponential functions and their applications. Prerequisite: MA 110 or permission of the instructor.

MA 200 Informal Geometry 3-3

Congruence, measurement, parallelism, similarity, mathematical models for space, non-metric geometry, incidence geometry, convexity, distance and the ruler postulate. Prerequisite: MA 102 or permission of the instructor.

MA 210 Analytic Geometry 3-3

Cartesian and Polar Coordinates Systems, Conics. Introduction to vectors, vector spaces and transformation of coordinates, matrices and determinants. Prerequisite: MA 102.

MA 230 Calculus I 3-3

Differential calculus including necessary elements of analytic geometry with emphasis on a rigorous approach to the derivative. Prerequisite: MA 120 or permission of the instructor.

MA 240 Calculus II 3-3

Integral calculus including techniques and applications of integration of algebraic and non-algebraic functions. Prerequisite: MA 230.

MA 250 Introduction to Abstract Algebra 3-3

The basic concepts of algebra such as groups, normal subgroups, rings, ideals, fields, and homomorphism. Prerequisite: MA 120 or 102.

MA 260 Linear Algebra 3-3

Vector space properties are applied to the study of systems of linear equations, linear transformations, matrix algebra, and analytic geometry. Prerequisite: MA 120.

MA 300 Calculus III 3-3

A continuation of MA 240 including the study of conic sections by polar coordinates, and topics selected from hyperbolic functions. Prerequisite: MA 240.

MA 310 Calculus IV 3-3

Curves and functions of several variables. The theory of curves, partial derivatives, the chain rule and applications. Prerequisite: MA 300.

MA 320 History of Mathematics 3-3

The development of mathematical ideas and methods from ancient to modern times, and their relevance for other fields of knowledge. Prerequisite: MA 102 or equivalent.

MA 330 Introduction to Mathematical Logic 3-3

Proof and truth in formal systems. Sentential logic and quantification. Set theory, proof theory, model theory, recursive function theory. Prerequisite: MA 102 or the equivalent.

MA 340 Geometry I 3-3

Elementary geometry is studied from a point set viewpoint. The foundations of Euclidean and non-Euclidean geometry are emphasized. Prerequisite MA 260.

MA 350 Probability and Statistics I 3-3

Counting methods, independence of events, conditional probability introduce basic concepts of probability. Emphasis on discrete random variables and probability distributions. Prerequisite: MA 102 or 120.

MA 360 Number Theory 3-3

Divisibility, congruence, and other properties of integers from an historical as well as a modern approach. Prerequisite: MA 102 or permission of the instructor.

MA 410 Elementary Differential Equations 3-3

Ordinary differential equations of the first order and degree including linear equations. Linear equations of the second order. Prerequisite: MA 310 or the equivalent.

MA 450 Topology 3-3

Point sets, metric spaces, topological spaces, connectedness, compactness, networks and maps, transformations, and selected problems. Prerequisite: MA 310.

MA 460 Geometry II 3-3

Synthetic methods are used to introduce the fundamentals of projective geometry. Analytic methods are used to develop this study. Prerequisite: MA 340.

MA 470 Probability and Statistics II 3-3

From discrete to continuous random variables. The binomial, poisson, and normal distributions, estimation of hypothesis and sampling theory. Prerequisite: MA 240 and MA 350.

MA 881 The Secondary School Mathematics Curriculum I 2-2

The methodology, objectives and content of a modern mathematics sequence for grades 7-12. Prerequisite: Permission of the instructor.

MA 882 The Secondary School Mathematics Curriculum II 1-1

Continuation of MA 881.

MA 883 Mathematical Concepts 3-3

Topics from arithmetic, algebra, and geometry of modern elementary school mathematics programs with attention to the structural and discovery approach. Prerequisite: MA 101.

MA 900 Independent Study 3 hours credit

Prerequisite: Permission of Department.

MEDICAL TECHNOLOGY

Courses at affiliated hospitals:

MT 800 Hematology, Serology and Blood Bank 8-19

Evaluating and enumerating blood cells; evaluating immunological reactions of serum; determination of human blood-group factors and reactions.

MT 810 Bacteriology and Parasitology 8-13

The pathogenic bacteria and fungi, with emphasis on methods of identification.

MT 820 Histology and Cytology 4-7

Individual instruction in the preparation and staining of tissues and body fluids for microscopic study.

MT 830 Biochemistry 8-13

The chemical composition of body fluids and the significance of its variation in disease.

MT 840 Laboratory Analysis 4-8

Supervised practice in the clinical laboratory.

MUSIC

MU 110 Art of Music I 3-3

Music as aesthetic experience. Representative styles and categories from the Middle Ages to the present.

MU 210 Applied Music 1-2

Techniques and skills for prospective teachers of elementary and special classes. Students who can pass an equivalency examination exempted.

MU 300 Art of Music II 3-3

Music's reflection of the values and ideals of societies past and present. Interrelationships between the fine arts.

MU 310 Symphony 3-3

Structural and stylistic characteristics of the symphony from the 18th century to the present.

MU 320 Opera 3-3

Several works from the standard operatic repertoire. Some significant trends in modern opera.

MU 330 Chamber Music 3-3

The vast area of music for smaller combinations of instruments; literature for the string quartet.

MU 335 American Music 3-3

American music from colonial times, with some emphasis upon "popular" and "art" music of the present century in the U.S.

MU 340 Twentieth-Century Music 3-3

The idioms and aesthetic notions of the present century, together with their relationships to the past.

MU 400 Choral Arts 1-2

Singing choral music past and present, including dramatic music. No more than 3 semester hours applicable toward graduation. Available for audit. (See MU 410).

MU 410 Instrumental Arts 1-2

Small and large ensemble playing of representative works for instruments. No more than 3 semester hours of MU 410 or any combination of MU 410 and MU 400 applicable toward graduation. Available for audit.

MU 420 Class Piano 1-2

Practical keyboard usages in classroom work; accompaniment, simple transposition, harmonization of melodies at the keyboard.

MU 430 Class Voice 1-2

Principles of voice production. Breath control, phrasing, resonance, diction.

MU 440 Song 3-3

Popular, folk, and art songs of many nations.

MU 450 Harmony 3-3

Harmonizations of simple melodies. Principles of modulation and key relationships.

MU 800 Music in Elementary Education 2-4

The objectives and techniques of teaching music in the first six grades. Prerequisite: MU 210.

MU 810 Music in Special Education 2-4
Objectives and techniques of teaching music in special classes. Prerequisite: MU 210.

MU 820 Workshop in Elementary Music Education 2-4
Modern approaches to professional music education in the elementary school. Primarily for elementary music teaching specialists.

MU 900 Independent Study in Music 3 credits

NURSING

NS 101 Introduction to Nursing I 1-1
Historical development of nursing as a concept and occupation.

NS 102 Introduction to Nursing II 1-1
The various approaches to the developing concept of nursing.

NS 201 Foundations of Nursing I 4-7
To develop and implement the broad concepts of patient care. Basic nursing skills applicable to all nursing situations.

NS 202 Foundations of Nursing II 4-7
Planned clinical experience. Prerequisite: NS 201.

NS 220 Foundations of Nursing III 4-10
Assessment of patient needs and development of nursing care plans. Open to R.N. students only.

NS 230 Nutrition 3-3
Basic nutrients essential to health; principles of dietary modifications in the treatment of disease.

NS 231 Foundations of Professional Relationships I 1-1
Through group process, the student is assisted to become aware of factors influencing relationships within the group and with patients.

NS 232 Foundations of Professional Relationships II 1-1
Continuation of NS 231.

NS 240 Introduction to Pharmacology 2-2
Pharmacodynamics of classes of drugs and their application in therapy.

NS 300 Medical-Surgical Nursing 12-24
Further development of application of concepts of nursing through identification of needs of the adult and his family.

NS 310 Maternal and Child Health Nursing 12-24
Physiological and psychological nursing needs of families during the child-bearing and child-rearing years. Prerequisite: BS 230.

NS 320 Medical-Surgical Nursing 4-16
Laboratory. Open to R.N. students only. Prerequisite: NS 220.

NS 330 Maternal and Child Health Nursing 4-16
Laboratory in above. Open to R.N. students only. Prerequisite: NS 220.

NS 340 Principles of Management 2-2
Elements and principles applicable to the practice of nursing and to beginning leadership positions in nursing.

NS 400 Advanced Medical-Surgical Nursing 12-24
Analysis of nursing problems. The major causes of illness are the frame of reference.

NS 410 Community and Psychiatric Nursing 12-24

Nursing care based on nursing, public health and psychiatric theory given to families. Clinical experiences in community agencies.

NS 420 Nursing Seminar 2-2

Current trends and problems. The nurse as both an individual and a group and organization participant.

PHILOSOPHY

PL 100 Introduction to Philosophy 3-3

The broad problems of truth, reality, goodness and beauty. Contributions of major schools of philosophy.

PL 200 Educational Philosophy 3-3

A guide to the philosophical treatment of educational problems. Employs the synoptic, critical and systematic areas of philosophy.

PL 300 Logic 3-3

Logic and language; informal fallacies; Aristotelian and Symbolic deduction; induction and scientific method; the nature of reduction.

PL 311 Theoretical Ethics 3-3

Analysis of moral experience; survey, evaluation, and synthesis of major ethical theories; ethics and behavioral science.

PL 312 Practical Ethics 3-3

Application of ethical theory to some of the major problems of contemporary man and society.

PL 320 Epistemology 3-3

The problem and method of human knowledge. Theories presented in the light of Idealism, Realism, Pragmatism, and Existentialism.

PL 330 Metaphysics 3-3

Introduction to the origin and development of metaphysical problems in Western philosophy.

PL 340 Philosophical Anthropology 3-3

The individual, social, and cosmic dimensions of man as seen from the perspectives of both philosophy and behavioral science.

PL 400 The Philosophy of Plato 3-3

Plato's theory of ideas, theory of knowledge, ethical and political views, doctrine of fine arts.

PL 410 The Philosophy of Aristotle 3-3

A study of Aristotle's philosophy as seen in his Metaphysics, Politics and Nicomachean Ethics.

PL 500 History of Medieval Philosophy 3-3

Includes St. Augustine, Boethius, Albertus Magnus, Avicenna, Averroes, Maimonides and St. Thomas, and their influence upon subsequent philosophy.

PL 510 History of Modern Philosophy 3-3

Trends of modern thought since the Renaissance, including Descartes, Locke, Spinoza, Leibniz, Hume, Kant, and Hegel.

PL 520 Contemporary Philosophy 3-3

An analytic and historical study of contemporary thought from Nietzsche to Whitehead.

PL 530 Existentialism 3-3

Origin of contemporary existentialism; its leading ideas as seen in writings of such philosophers as Kierkegaard, Heideggers, Jaspers, Marcel and Sartre.

PL 601 American Philosophy I 3-3

From the Colonial Period through the 18th Century. Edwards through Emerson.

PL 602 American Philosophy II 3-3

From 1800 through today. Ralph Barton Perry through Whitehead.

PL 700 Political and Social Philosophy 3-3

The various political and social ideas beginning with Plato and continuing to Marx.

PL 710 Philosophy of Religion 3-3

The God-problem and religious experience as seen in the classical philosophers and in the philosophies of existentialism and pragmatism.

PL 720 The Philosophy of Communism 3-3

Its origins, philosophy, and development as found in the writings of Karl Marx and as it is applied today.

PHYSICAL EDUCATION

General Education requirement:

PE 100 Health and Fitness 3-3

Body structure, physical fitness, motor learning, motor performance in terms of their relationship to man's physical well-being.

ELECTIVES

PE 200-400 Activity courses 2-1

Activities are taught on a half-semester basis. Each half semester carries 2 clock hours and 1/2 credit.

PE 200	Handball	PE 214	Tennis
PE 201	Physical Conditioning	PE 215	Advanced Tennis
		PE 216	Archery
PE 202	Weight Training	PE 217	Badminton
PE 203	Wrestling	PE 218	Fencing
PE 204	Squash	PE 219	Golf
PE 205	Soccer	PE 220	Judo and Self-Defense
PE 206	Lacrosse		
PE 207	Games	PE 221	Bowling
PE 208	Basketball	PE 222	Track and Field
PE 209	Advanced Basketball	PE 223	Gymnastics
		PE 224	Advanced Gymnastics
PE 210	Volleyball		
PE 211	Softball	PE 225	Slimnastics
PE 212	Swimming	PE 226	Rhythmics
PE 213	Advanced Swimming	PE 227	Field Hockey
		PE 228	Advanced Field Hockey

PE 080 First Aid 0-2

The official Red Cross Standard course is required for students in

all curricula except Nursing, Medical Technology and all Bachelor of Arts programs.

PE 800 Physical Education in the Elementary School 1-2

Theory and practice course designed to guide the classroom teacher in organizing a comprehensive program of physical education activities.

PE 801 Physical Education for Secondary Schools 3-3

Pertinent background material for organizing and conducting an integrated activity program for junior and senior high school boys.

PE 802 Fundamentals of Coaching 3-3

For the prospective teacher-coach. An analysis of the principles and practices of coaching in various sports.

PHYSICS

PH 101 General Physics 3-4

An introductory computer-based physics course for non-physics majors. Emphasis on physical concepts of motion. Knowledge of algebra is assumed.

PH 111 Introductory Physics I 3-4

Study of motion, Newtonian Mechanics, wave motion, light, electromagnetic theory.

PH 112 Introductory Physics II 3-4

Continuation of PH 111. Relativity, quantum theory, nuclear and atomic physics.

PH 121 General Physics I 4-5

Newtonian mechanics: motion, work, energy, momentum, simple harmonic motion; heat, kinetic theory.

PH 122 General Physics II 4-5

Eletrostatics, magnetism, electric circuits; wave motion; geometric and physical optics. Prerequisite: PH 121

PH 123 Modern Physics 3-3

Particles in electric and magnetic fields, Bohr atom, quantum theory, special relativity, matter-wave theory, radio activity. Prerequisite: PH 122.

PH 201 Mathematical Methods in Physics I 3-3

Determinants, matrices, solution of systems of equations, vector algebra, complex numbers; application of these topics to physics.

PH 202 Mathematical Methods in Physics II 3-3

Functions of several variables; partial differentiation; multiple integrals; ordinary differential equations of first and second order. Application to physics. Prerequisite: PH 201.

PH 203 Mathematical Methods in Physics III 3-3

Series solution of ordinary differential equations with variable cooefficients; vector identies and vector differentiation; partial differential equations; applications. Prerequisite: PH 202.

PH 221 Electronic Physics I 4-5

Foundations of electromagnetic theory, including electrostatics, electromagnetism, and alternating currents. Prerequisite: PH 122.

PH 222 Electronic Physics II 4-5

Basic electronic phenomena, covering topics in elementary circuit theory, tube characteristics and tube circuits, transistors and transistor circuits. Prerequisite: PH 221.

PH 311 Intermediate Mechanics 3-3

Newton's Laws of Motion, conservation of energy, spherically symmetric force fields, gravitational fields and planetary orbits, Lagrange's and Hamilton's equations. Prerequisite: PH 122, and PH 202 or MA 230.

PH 312 Vibrations and Waves 3-4

Linear Oscillator, free and forces oscillations, damping, vibrating string, traveling and standing waves, Fourier analysis, introduction to wave optics. Prerequisite: PH 311.

PH 321 Seminar in Physics 1-1

Oral and written presentation of topics on recent developments in the field of physics. Required of physics majors. Prerequisite: Junior standing in Physics.

PH 331 Quantum Mechanics 3-3

Old Quantum Theory, Schrodinger equation, Physical interpretation of wave function, energy levels, harmonic oscillator, hydrogen atom, perturbation theory, helium atom. Prerequisite: PH 123, and PH 202 or MA 300.

PH 401 PSSC Physics 3-4

For prospective secondary physics teachers. Concepts, demonstrations and experiments based on Physical Science Study Committee physics. Prerequisite: PH 122.

PH 411 Statistical Mechanics and Thermodynamics 3-3

Laws of thermodynamics; entropy; Carnot cycle; kinetic theory of gases; Bose and Fermi gases; low temperature physics. Prerequisite: PH 311.

PH 421 Atomic and Nuclear Physics 3-3

Electronic configuration of the atoms; Pauli principle; shell model of the nucleus; neutronic physics; radioactivity. Prerequisite: PH 331.

PH 431 Solid State Physics 3-4

An introduction to theoretical and experimental physics of the solid state. Prerequisite: PH 331.

PH 441 . Advanced Laboratory 3-5

Selected experiments from different areas of physics; required of physics majors on B.A. program. Prerequisite: PH 222.

PH 881, 882 Physics Methods 2-2, 1-1

Methods of teaching physical sciences at the secondary level. Includes a survey of modern secondary science curriculum.

PH 900 Independent Study 3 credits

Laboratory research under the guidance of the physics staff. Prerequisite: Permission of the instructor.

SCIENCE

CS 201 and 202 Physical Science I and II 3-4 each

For the non-scientist. Emphasis is upon the building of conceptual models, solving techniques, and the processes of science.

CS 111 Astronomy 3-4

A study of planetary motion, the sun, stars, and galaxies. An observing program. A background of algebra is assumed.

CS 121 Earth, Sea and Air 3-4

Selected topics from the earth sciences.

CS 810 Science in Elementary Education 3-4

Content, methods and resources suggested by curriculum groups are examined and experiences developed that exemplify current thinking in science education.

POLITICAL SCIENCE

Courses in political science are intended for any student with a general interest in politics and government. They are also designed to provide a proper background for students interested in pursuing graduate study or a career in law, public administration, or government and political science. It is recommended that these students take six hours of Modern American Government and six hours of electives.

PS 101 Modern American Government I 3-3

Focuses upon current issues in urban and state government and politics and attempts to evaluate proposed solutions.

PS 102 Modern American Government II 3-3

Growth and complexity of the functions performed by the national government and their relationship to cooperative federalism.

N.B. PS 101 and 102 are prerequisites for all other courses in political science.

PS 200 Constitutional Law and the Supreme Court 3-3

Treats the Constitution as a living document, tracing its development through historic Supreme Court decisions.

PS 300 International Law and Organization 3-3

Nature of the pioneering political institutions which have been fashioned to cope with the issues of world interdependence.

PS 350 World Political Systems 3-3

Importance of the world's political heritage and the implications for the emerging nations of liberal democracy, communism, and dictatorship.

SPECIAL EDUCATION

SE 220 Exceptional Children 4-4

Etiology, classification, problems of children who have physical disability, mental retardation, emotional or social difficulties, giftedness. Clinical observations and consultations.

SE 230 Nature and Needs of the Mentally Retarded 3-3

Characteristcs of both educable and trainable children, methods of classification, and causes of mental retardation. Responsibility of community and school.

SE 240 Home Arts 2-4

Food, clothing and other home-arts areas for those who will teach and work with the mentally retarded.

SE 250 Methods of Teaching the Mentally Retarded 3-3

Organization and planning of activities and materials for different maturational levels. Current research related to the application of learning patterns.

SE 260 Curriculum for the Mentally Retarded 3-3

Emphasizes development of learning, language arts, quantitative thinking, social and civic responsibilities, pre-vocational experiences.

SE 270 Reading in Special Education 3-3

Children's reading difficulties, preventive and remedial techniques, current reading materials, diagnostic tests. Classroom work with children.

SE 300 Nature and Needs of the Emotionally Disturbed (Etiology, Dynamics and Treatment of the Emotionally Disturbed) 3-3

Causes and influences of emotional disturbances. Emphasis on diagnosis and implications for educational planning.

SE 310 Methods and Curriculum for Teaching the Emotionally Disturbed 3-3

Organization, planning, materials and curricula for teaching the emotionally disturbed at various levels.

SE 400 Student Teaching 12-25

Students have eighteen weeks of complete classroom responsibility, guided by cooperating teacher, college supervisor, professional personnel from other disciplines.

SE 410 Curriculum for the Trainable Child 3-3

Emphasis on content appropriate to the areas of language arts, quantitative thinking, social and civic responsibility.

SE 500 Early Childhood Experiences for Exceptional Children 3-3

Emphasis on the educationally relevant experiences for personal adjustment, communication, socialization, and academic readiness.

SE 510 Identification and Diagnosis of Learning Disabilities 3-3

Theories of learning and procedures for identifying and diagnosing children with learning disabilities.

SE 610 Industrial Skills and Analysis of Job Areas 3-3

A laboratory course providing technical knowledge and instruction of industrial skills appropriate for the mentally retarded.

SE 620 Nature and Needs of the Multiple-Handicapped 3-3

Emphasis on the commonalities, services and needs of the multiple-handicapped.

SE 630 Problems in Language Arts for Special Education 3-3

Students identify, develop, use resources related to classroom problems in language areas. Stages of development and deviations of exceptional child.

SE 640 Seminar in Special Education 3-3

Educational research and study of problems in special education. Students appraise and apply resources in development of their research problem.

SE 645 Program Development for Children with Learning Disabilities 3-3

Interpretation, identification and organization of sequential programs for children with learning disabilities.

SE 650 Secondary Education Programs for the Educable Mentally Retarded 3-3

Lectures, discussions, observations and readings for an understanding of how the secondary school can serve the mentally retarded.

SE 660 Seminar in Mental Retardation 3-3

Educational research and study of problems in mental retardation. Students appraise and apply resources in development of their research problem.

SE 900 Independent Study 3 credits

Review, development and synthesizing of a problem in Special Education. Open to juniors and seniors with permission of instructor.

SPEECH

SH 010 Speech Improvement 0-1

Remedial course. Students are assigned after diagnosis, and recommendations of need for speech improvement. Individual and group therapy.

SH 100 Speech 2-2

Effective organization and delivery of speeches, oral interpretation of literature, techniques of intelligent criticism. Forums, panel discussions, parliamentary procedure. General Education requirement.

SH 200 Acting 3-2

Fundamentals of creative mime, improvisation, stage speech and movement. Reading and analysis of plays.

SH 250 Fundamentals of Theater Production 2-1

A laboratory in theater primarily concerned with play production. Acting, directing, stagecraft.

SH 300 Argumentation and Debate 3-3

The argumentive process in a democracy. Debate, reasoning, research.

SH 310 Intercollegiate Debate 1 credit per semester

Two such credits may satisfy speech requirement; may repeat for credit; may be pursued as non-credit extracurricular activity.

SH 320 Persuasion 2-3

Theory and Practice. Analysis of historical and contemporary speeches. Prerequisite: SH 100.

SH 330 Introduction to Communication 3-3

Studies man's capacity to relate to other humans and to his environment through conscious and "out-of-awareness" communication.

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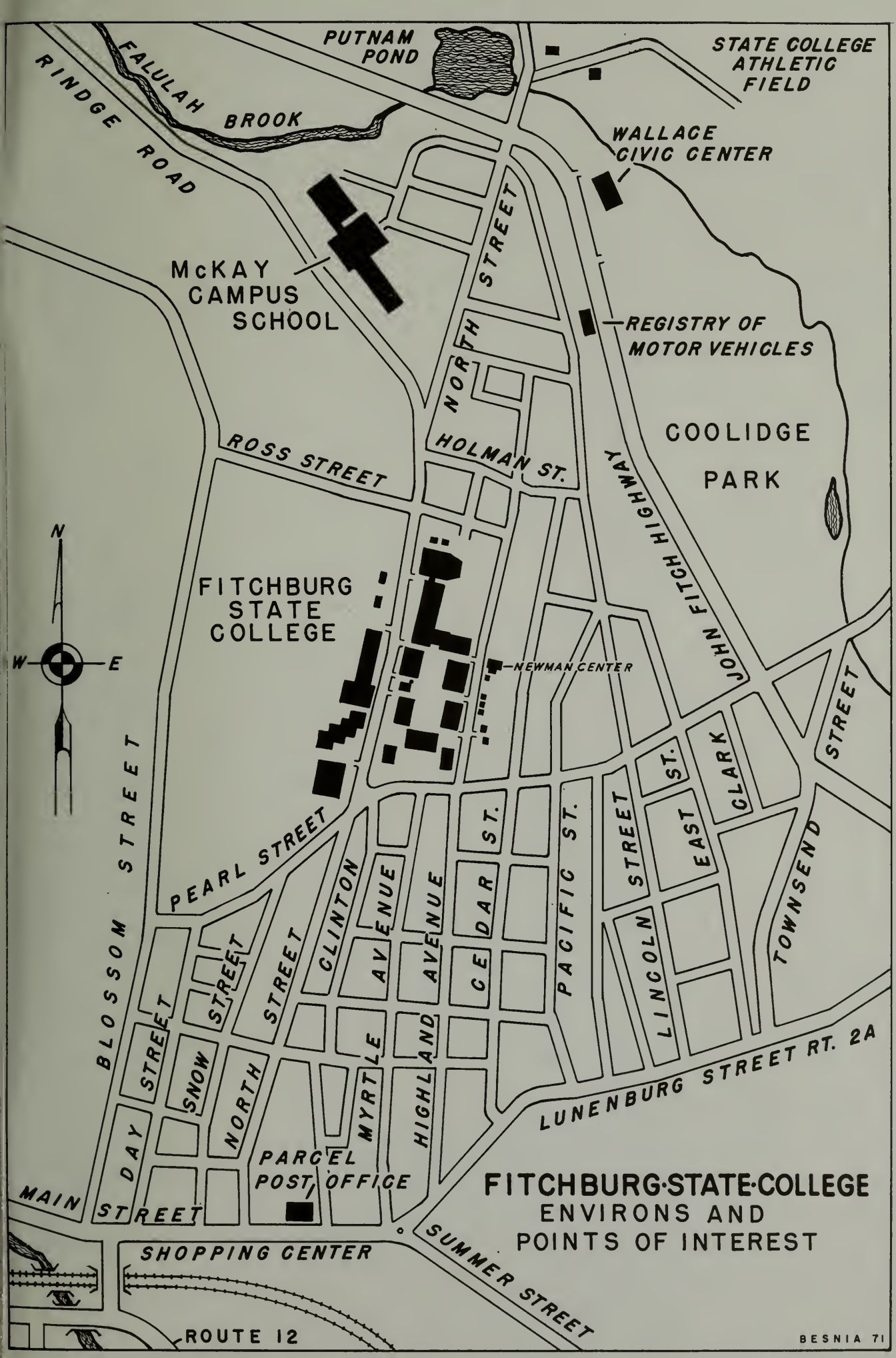
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